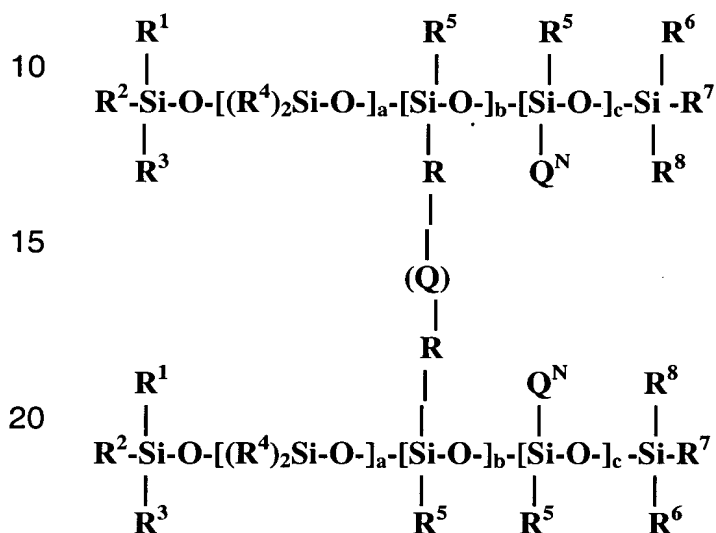


Claims

We Claim:

1. A personal care product selected from the group consisting of antiperspirants and/or deodorants, soaps, and hair care products and made with a quaternary amino functional silicone elastomer having a molecular weight in the range of 50,000 - 650,000 daltons and comprising units which may be the same or different wherein each unit is represented by Formula I:

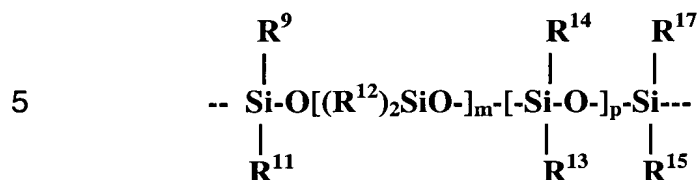


25 Formula I

where:

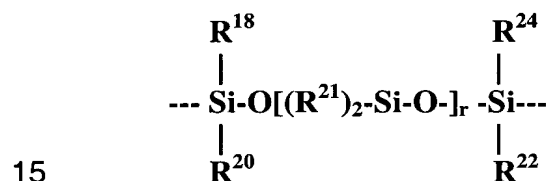
- $\text{R}^1, \text{R}^2, \text{R}^3, \text{R}^4, \text{R}^5, \text{R}^6, \text{R}^7$ and R^8 may be the same or different and are each independently selected from the group consisting of C1-C10 monovalent hydrocarbon radicals;
- 30 R is a divalent hydrocarbon radical of formula $\text{-(CH}_2\text{)}_s\text{-}$ where s is a number in the range of 2-10;
- a = is an average value and is a number in the range of 0-500;
- b = is an average value and is a number in the range of 1-150;
- c = is an average value and is a number in the range of 1-50;
- 35 provided that $b + c$ is a number in the range of 2-200;

Q is a siloxane chain selected from the group consisting of Q^{1A} of Formula VA:



Formula VA

and Q^{1B} of Formula VB:



Formula VB

where

m is an average number with a value in the range of 2,000-10,000;

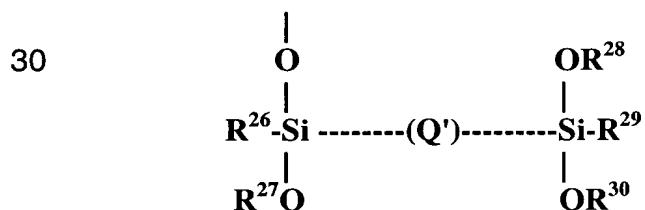
p is an average number with a value in the range of 1-200;

R¹³ is selected from the group consisting of C2-C10 monovalent hydrocarbon radicals having an unsaturation at the terminal carbon which may be used as a crosslinking site at the unsaturation;

R⁹, **R**¹¹, **R**¹², **R**¹⁴, **R**¹⁵ and **R**¹⁷ may be the same or different and are each independently selected from the group consisting of C1 to C10 monovalent hydrocarbon radicals;

R¹⁸, **R**²⁰, **R**²¹, **R**²² and **R**²⁴ may be the same or different and are each independently selected from the group consisting of C1 to C10 monovalent hydrocarbon radicals; and

Q^N is a quaternary amino polysiloxane pendent group of Formula VIII:

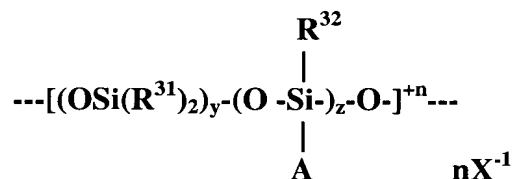


Formula VIII

where

R^{26} , R^{27} , R^{28} , R^{29} and R^{30} may be the same or different and are each independently selected from the group consisting of C1-C10 monovalent hydrocarbon radicals; and Q' is a quaternary amino functional polydimethylsiloxane of formula:

5



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where:

A = a di-cation of formula $-(\text{CH}_2)_3\text{N}(R^{37})_2^+\text{CH}_2\text{CH}_2\text{N}(R^{38})_3^{+1}$ or a mono-cation of formula $-(\text{CH}_2)_3\text{N}(R^{39})_3^{+1}$; X^{-1} is selected from the group consisting of $\text{CH}_3\text{COO}^{-1}$;

15 $(\text{SO}_4)^{-2}$; $(\text{SO}_3)^{-1}$; Cl^{-1} ; I^{-1} ; and F^{-1} (particularly $\text{CH}_3\text{COO}^{-1}$; I^{-1} and Cl^{-1});

R^{31} and R^{32} may be the same or different and are each selected from the group consisting of C1-C10 monovalent hydrocarbon radicals;

R^{37} , R^{38} and R^{39} may be alike or different and are each independently selected from the group consisting of hydrogen, and C1-C10 monovalent hydrocarbon radicals.

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2. A personal care product a claimed in Claim 1 wherein the quaternary amino functional silicone elastomer of has a molecular weight in the range of 70,000-200,000 daltons.

25 3. A personal care product a claimed in Claim 1 wherein the quaternary amino functional silicone elastomer has each of R^1 , R^2 , R^3 , R^4 , R^5 , R^6 , R^7 and R^8 as methyl.

4. A personal care product a claimed in Claim 1 wherein the quaternary amino functional silicone elastomer has each of R^9 , R^{11} , R^{12} , R^{14} , R^{15} and R^{17} as methyl.

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5. A personal care product a claimed in Claim 1 wherein the quaternary amino functional silicone elastomer has each of R^{18} , R^{20} , R^{21} , R^{22} and R^{24} as methyl.

6. A personal care product as claimed in Claim 1 wherein the quaternary amino functional silicone elastomer has each of R^{26} , R^{27} , R^{28} , R^{29} and R^{30} as methyl.
7. A personal care product as claimed in Claim 1 wherein the quaternary amino functional silicone elastomer has each of R^{31} , R^{32} , R^{37} , R^{38} and R^{39} as methyl.
8. A personal care product as claimed in Claim 1 wherein the quaternary amino functional silicone elastomer has each of R^1 , R^2 , R^3 , R^4 , R^5 , R^6 , R^7 , R^8 , R^9 , R^{11} , R^{12} , R^{14} , R^{15} , R^{17} , R^{18} , R^{20} , R^{21} , R^{22} , R^{24} , R^{26} , R^{27} , R^{28} , R^{29} , R^{30} , R^{31} , R^{32} , R^{37} , R^{38} and R^{39} as methyl.
9. A personal care product as claimed in Claim 1 which is an antiperspirant and/or deodorant comprising at least 10 weight % of a volatile silicone.
10. A personal care product as claimed in Claim 1 which is a hair care product.
11. A personal care product as claimed in Claim 1 which is a soap bar.
12. A personal care product as claimed in Claim 1 which is a shower gel.
13. A personal care product as claimed in Claim 1 which is a mousse.
14. A personal care product as claimed in Claim 1 which is a shampoo.
15. A personal care product as claimed in Claim 1 which is a hair conditioner.